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Government of the Province of Saskatchewan

DEPARTMENT OF AGRICULTURE

FODDER CORN

If Indian corn as fodder can be grown successfully in Manitoba, we certainly can grow it equally successfully in Saskatchewan. It has been grown for fodder purposes at the Experimental Farm, Indian Head, Saskatchewan, for a number of years. Last year ten varieties were tested. They were planted on summerfallow in drills three feet apart, at the rate of thirty pounds of seed per acre. The planting was done on May 26 and the crop cut on September 15. The results given below are those from the two most promising sorts.

Variety	Length	Stage of maturity	Yield per acre	
	Inches		Tons	Lbs.
North-western Dent....	80	Early milk	18	600
Longfellow.....	72	Early milk	26	1,400

The "Free Press" variety is somewhat earlier and gives good results in more northern districts. While corn has been ripened occasionally the production of ripe grain cannot be considered as being on a profitable basis. But with the right varieties and proper cultivation the production of a satisfactory yield of fodder corn is as certain as that of any other successful crop and the amount of fodder produced is greater than can be obtained from any other crop at present known.

A Substitute for Summerfallow.

Summerfallowing may insure an excellent crop of grain the following year but it does so at the loss of a year's use of the land. With land becoming more expensive and at the same time its virgin fertility being depleted, some system needs to be adopted that is less extravagant of soil fertility than straight grain growing and summerfallow. While it is possible to adopt a rotation that provides for the use of barnyard manure without including corn, still, the addition of corn makes it more practicable and better balanced. The principal advantage that corn has over summerfallow is in making possible the profitable use of the land every year.

Corn will give almost as good results as the fallow and it pays for the use of the land and for the work expended on it by giving a large crop of excellent forage.

Place in Rotation.

Indian corn produces an extensive mass of roots in the surface soil and it is prepared to make the best possible use of the available plant food. It will, therefore, give good results on land which contains a large amount of vegetable matter. It can thus be expected to grow well on sod land or soil containing unrotted farmyard manure. Being a cultivated or hoed crop, it is used for cleaning the land of weeds, and the summer cultivation forms a mulch on the surface, conserving the moisture for the succeeding crop. Those who are growing corn maintain they get better results from wheat on corn stubble than on summerfallow, and the Brandon Experimental Farm has shown that grain following a crop of corn is always the most cheaply grown grain on the farm because there is no back debt against it for an idle year, but it must be remembered that the corn field must be as clean as a summerfallow.

Soil Preparation.

Where corn is sown on sod land, the field should be "broken" and "back set" the previous year and worked down firm and level with the disc and drag harrow in the fall and spring. If stubble land is used it should be ploughed, packed and harrowed in the fall and harrowed from time to time in the spring to keep a perfect mulch and to kill the weeds. The seed bed must be firm with a fine dust blanket on the surface.

Time of Planting.

The time of planting is a very important factor in the successful production of fodder corn. It should not be sown before the soil has become thoroughly warmed; this will be about the twenty-fourth of May in the average season. It should not be sown later than the fifteenth of June so that it may become sufficiently matured before being injured by fall frosts.

Quantity of Seed per Acre.

When sown in drills about half a bushel of seed per acre will be sufficient. This will place the seeds four or five inches apart in the row, with the drills thirty-six inches apart. If the seed is put in hills, a smaller quantity will be required, but for fodder purposes drilling is most suitable because the stems do not grow so coarse.

Methods of Seeding.

Corn may be planted with a hand planter, a grain drill or a corn drill. No new machinery need be purchased. The ordinary grain drill is well suited for this purpose. Some of the spouts must be closed up, allowing one to run every thirty-six or forty-two inches apart. This can be done by nailing a shingle or paper over the unused holes in the bottom of the hopper.

Inter Tillage.

Corn can be used as a cleaning crop because it permits of inter tillage or cultivation between the rows, but it is absolutely necessary that it be kept clean by repeated cultivation. The crop itself if thereby greatly improved and responds very quickly to its benefits.

Early Cultivation with Harrow.

After the corn is sown it should be harrowed every week with a light drag harrow. This will kill the weeds much more effectively than a cultivator. The harrowing may be continued until the corn is six or seven inches high. Little will be pulled out or broken off if the precaution is taken to harrow in the afternoon of a bright warm day, because at this time the corn is more or less wilted and will bend readily. The two horse cultivator should then be used often enough to keep the land clean. When the corn gets too high for this implement the one horse scuffler should be brought out. At first the cultivation may be both deep and close to the corn, but as the season advances the cultivation should be less deep and at a greater distance from the rows. On the Experimental Farm the cultivation of the corn is continued until the man and the horse cannot be seen in the tall corn. This is the way to get big crops.

Harvesting.

The later the harvesting can be left without damage by frost the better. The corn should be allowed at least to tassel before being cut. Where a small amount is being grown it may be harvested with an ordinary binder. There may be difficulty in getting the reel high enough to throw the corn back on the table but this may be overcome to some extent by removing every other bar on the reel. With larger fields it will be found profitable in course of time to purchase a corn harvester as the wear and tear on the grain binder is considerable. If corn growing for fodder can be taken up by four or five farmers in a community it is an advantage for them to co-operate in the purchase of a corn binder and if they are willing to work together, one machine can serve their needs quite satisfactorily.

Stooking.

There are two distinct methods of curing and storing fodder corn. Where the corn is not going to be put in a silo, stooking is a very important operation as it has to be left in the field until fed. It contains such a large amount of moisture that if put in a stack or mow it will heat and spoil. After the corn has been cut a couple of days it is ready to stook. Each stook should contain about twenty sheaves. When the stook is completed it should be bound at the top with binder twine. A stooking jack will make this work much easier.

Storing in Silo.

The ideal way of storing fodder corn is in a silo. It is much to be preferred to stooking. Ensilage is a much more valuable food on account of its succulence; it takes the place of the green grass of summer. It is

more economical as it is eaten up clean while the coarse stalks of dry fodder are usually left.

With the spread of mixed farming, silos are certain to become more common. No up-to-date dairy farm is complete without a silo and for other types of animal husbandry they are most useful.

The cylindrical silo of cement or wooden stave construction are preferred. "The Stave Silo," Bulletin No. 35, deals with the construction of wooden silos and may be obtained from the Publication Branch, Department of Agriculture, Ottawa.

Where low winter temperatures make the freezing of the ensilage a consideration, the wooden stave has the advantage over the cement silo. The nearer to full development corn can be brought the better the grade of ensilage. When corn has to be cut on the green side to escape frost it can be considerably improved if allowed to lie on the ground for about five days after it is cut by the binder and before it is cut up for storing in the silo.

A cutting box is a necessary piece of machinery in filling since the stalks must be cut into pieces about one-half inch in length. It will then pack in closer and keep much better. This packing or tramping is important, especially round the walls. After the silo has been filled it should be allowed to settle for a few days and filled up again. It will keep better if when it has stopped settling the surface is level or slightly higher in the centre.

Using the Ensilage.

The silo is emptied from the top downwards. It should be lowered uniformly and feeding from it cannot be discontinued once it is begun or the top will spoil. Ensilage may be fed directly to cattle just as it comes from the silo. It is better, however, to mix it with cut straw and use in conjunction with clover and alfalfa hay or bran and oat chop. These latter feeds are higher in proteids and help to balance the highly carbonaceous corn and straw.

Cost of Corn Equipment.

The cost of suitable equipment for corn growing and ensiling in Saskatchewan on a moderately large scale (fifteen to twenty-five acres annually) assuming that seeding is done with a grain drill and that an engine is available, is about as follows:

Two horse cultivator	\$50
One horse cultivator	10
Corn binder	165
Cutting box (blower)	150
Stave silo, 200 ton capacity, about	200

\$775

It should be borne in mind that a great deal can be and is being grown in Western Canada without the aid of any implements not found on every grain farm. Try some.



